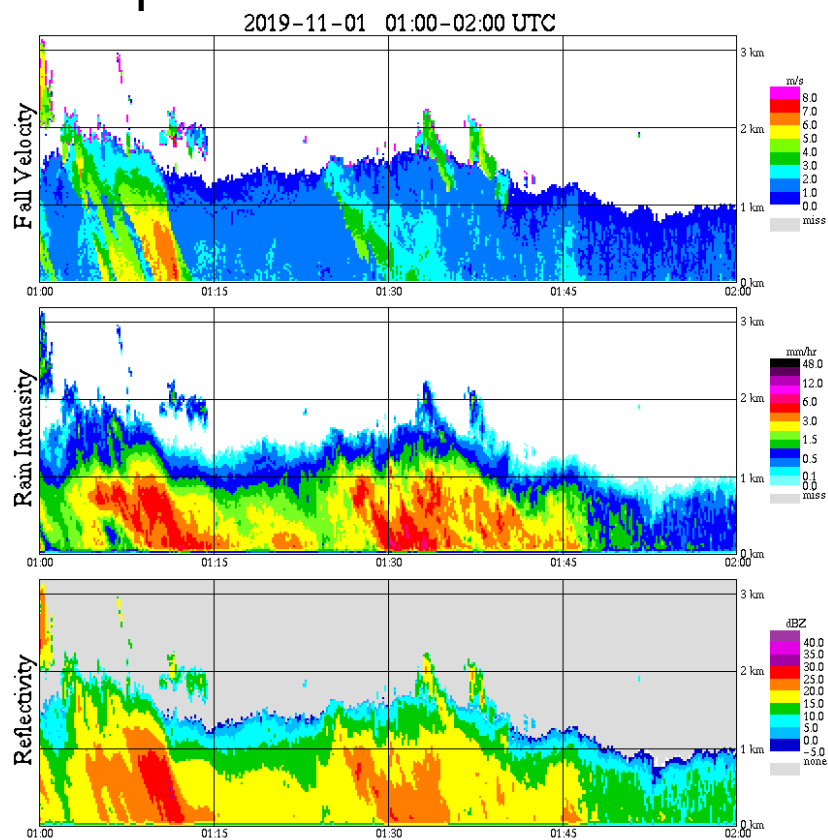


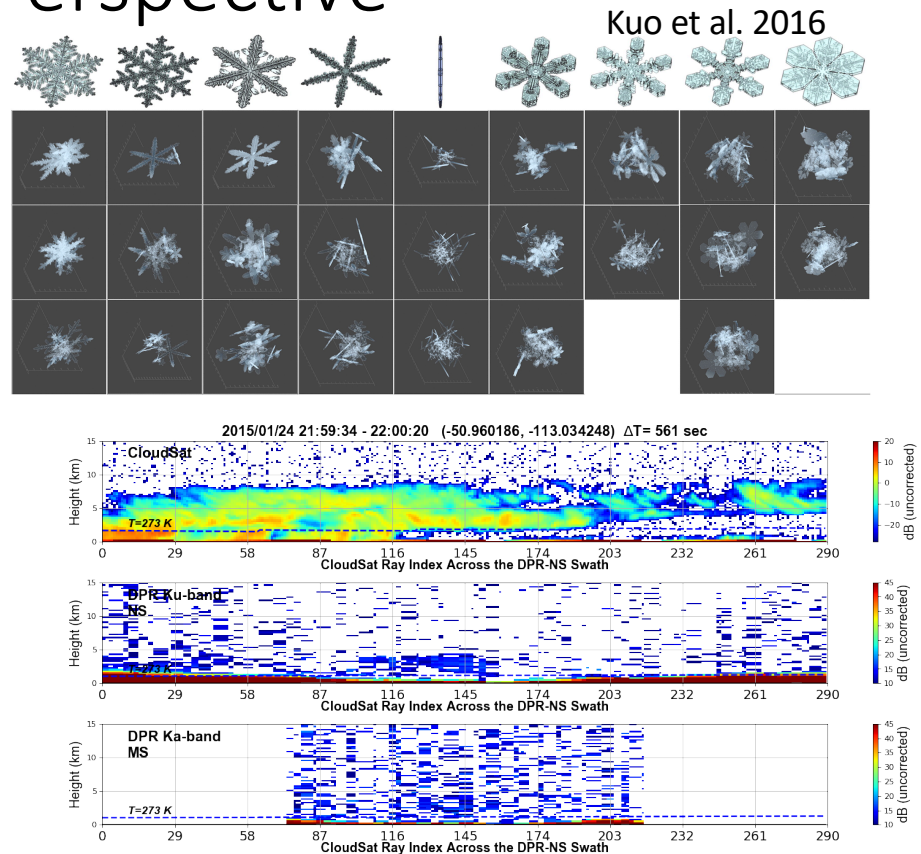
# Connecting GV and Algorithms: Combined and Passive Algorithm Perspective

- Validation often centered on “Surface” precipitation
  - Extrapolation to surface
- Both CMB and GPROF algorithms rely on the active sensor signal via DPR as precipitation reference, but the passive signal is sensitive to total column water content
  - MRR potential here, MRMS
  - Connect to environmental characteristics/dynamics



# Connecting GV and Algorithms: Combined and Passive Algorithm Perspective

- Ice particles/PSD
  - Ensembles
  - Distribution – relate to environment (or observable) in some sort of broad way to make use of improved scattering parameters
- Light Precipitation
  - Below radar sensitivity
  - Tough to observe areas – Southern Ocean, etc. - CloudSat
  - MRR



# Connecting GV and Algorithms: Combined and Passive Algorithm Perspective

- Connection required between retrieval errors and associated conditions/regimes
  - Is scattering or emission most important in this regime?
  - Connection to particular defining geophysical parameters to send retrieval in the right direction (constraints)?
- Retrieval is instantaneous, but to understand these connections need more information in validation data (space and time)
  - More process-based approach
  - Likely need to move beyond “single profile alone in space and time” approach to understand retrieval errors – to create these relationships need these dimensions from GV as well